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09/972,051	10/09/2001	Seung June Yi	K-0314	3892
34610	7590	08/10/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			DAVIS, CYNTHIA L	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/972,051

Applicant(s)

YI, SEUNG JUNE

Examiner

Cynthia L Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-14, 18-21, 38, 39, 41, 42, 44, 63, 64 and 70-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-14, 18-21, 38, 39, 41, 42, 44, 63, 64 and 70-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/5/04, 1/25/02
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Election/Restrictions***

2. Applicant's election with traverse of Group 2 in the reply filed on 6/17/2005 is acknowledged. Further, applicant requests that some claims from Group 3 should be joined with Group 2. Election may not be made of part of a group.

The requirement is deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11, 13, 14, 38, 41, 63, 70, and 72 are rejected under 35 U.S.C. 102(b) as being anticipates by Rostoker.

Regarding claim 11, a deciphering module that deciphers ciphered protocol data units (PDUs) of the RLC layer received from a lower layer of the receiving device through at least one of a plurality of channels is disclosed in Rostoker, column 27, lines 24-25 (disclosing decrypting, or deciphering, received data) and column 40, lines 35-37 (disclosing the use of the invention in a wireless, or radio, environment). A data storing module that stores the deciphered PDUS is disclosed in figure 30 (the packet is stored in memory while the header is processed). A header removing module that removes

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headers from the deciphered PDUS is disclosed in column 21, lines 46-48. A reassembly module that reassembles the deciphered PDUS outputted from the header removing module into service data units (SDUs) and then transmits the SDUs to an upper layer through an access point is disclosed in column 12, lines 34-37.

Regarding claim 13, the headers include sequence numbers (SN) representing order numbers of the PDUs is disclosed in column 16, line 1.

Regarding claim 14, a data retransmission management module that controls retransmission of ciphered PDUs to the data receiving device is disclosed in column 13, lines 15-18, and column 19, line 20 (disclosing retransmission of PDUs).

Regarding claim 38, deciphering ciphered protocol data units (PDUs) of the RLC layer received from a lower layer through at least one of a plurality of channels is disclosed in Rostoker, column 27, lines 24-25 (disclosing decrypting, or deciphering, received data) and column 40, lines 35-37 (disclosing the use of the invention in a wireless, or radio, environment). Storing the deciphered PDUS in a data storing buffer as PDUs is disclosed in figure 30 (the packet is stored in memory while the header is processed). Removing headers from the PDUs is disclosed in column 21, lines 46-48. Reassembling the PDUs, from which the headers are removed, into service data units (SDUs); and transmitting the reassembled SDUS to an upper layer through an access point is disclosed in column 12, lines 34-37.

Regarding claim 41, reading the removed headers is disclosed in column 21, lines 46-48 (disclosing storing routing information that is contained in the header, which would necessarily involve reading the header).

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Regarding claim 63, wherein each ciphered PDU comprises a header and data is disclosed in column 21, lines 46-52 (headers and packet data are both stored). The header includes a sequence number is disclosed in column 16, line 1. An optional length indicator is disclosed in column 32, lines 28-31.

Regarding claim 70, wherein each ciphered PDU comprises a header and data is disclosed in column 21, lines 46-52 (headers and packet data are both stored). The header includes a sequence number is disclosed in column 16, line 1. An optional length indicator is disclosed in column 32, lines 28-31.

Regarding claim 72, a data retransmission module for controlling retransmission of data related to the PDUs to which the headers stored in the data storing module are added is disclosed in column 13, lines 15-18, and column 19, line 20 (disclosing retransmission of PDUs) and column 11, lines 5-8 (disclosing manufacturing of headers for transmission).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker in view of Forssell.

Regarding claim 12, the at least one of the plurality of channels is at least one of DTCH, DCCH, CCCH, or SHCCH is missing from Rostoker. However, Forssell

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discloses in column 4, lines 11-13, a CCCH being available in a RLC system. It would have been obvious to one skilled in the art at the time of the invention to use a CCCH in the system of Rostoker. The motivation would be to use an available type of channel. The ciphered PDUs are received from a transmitting side is disclosed in Rostoker, column 4, lines 45-49 (disclosing transmitting and receiving of data). The access point is a UM-SAP is missing from Rostoker. However, Forssell discloses in column 3, lines 57-59, that unacknowledged mode is an available RLC mode, and that the network operates over an SAP in column 2, lines 54-55. It would have been obvious to one skilled in the art at the time of the invention to use an UM-SAP in the system of Rostoker. The motivation would be to use a mode commonly available in RLC communication.

Regarding claim 39, the at least one of the plurality of channels is at least one of DTCH, DCCH, CCCH, SHCCH, or CTCH is missing from Rostoker. However, Forssell discloses in column 4, lines 11-13, a CCCH being available in a RLC system. It would have been obvious to one skilled in the art at the time of the invention to use a CCCH in the system of Rostoker. The motivation would be to use an available type of channel. The ciphered PDUs are received from a transmitting side is disclosed in Rostoker, column 4, lines 45-49 (disclosing transmitting and receiving of data). The access point is a UM-SAP is missing from Rostoker. However, Forssell discloses in column 3, lines 57-59, that unacknowledged mode is an available RLC mode, and that the network operates over an SAP in column 2, lines 54-55. It would have been obvious to one skilled in the art at the time of the invention to use an UM-SAP in the system of

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Rostoker. The motivation would be to use a mode commonly available in RLC communication.

5. Claims 18 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker in view of Forssell and Parmar.

Regarding claim 18, the at least one of the plurality of channels is at least one of DCCH or DTCH is missing from Rostoker. However, Parmar discloses in column 4, lines 46-47, a DTCH being available in a RLC system. It would have been obvious to one skilled in the art at the time of the invention to use a DTCH in the system of Rostoker. The motivation would be to use an available type of channel. The access point is a AM-SAP is missing from Rostoker. However, Forssell discloses in column 3, lines 57-59, that acknowledged mode is an available RLC mode, and that the network operates over an SAP in column 2, lines 54-55. It would have been obvious to one skilled in the art at the time of the invention to use an AM-SAP in the system of Rostoker. The motivation would be to use a mode commonly available in RLC communication.

Regarding claim 44, at least one of the plurality of channels is at least one of DCCH or DTCH, and the access point is an AM-SAP is missing from Rostoker. However, Parmar discloses in column 4, lines 46-47, a DTCH being available in a RLC system. It would have been obvious to one skilled in the art at the time of the invention to use a DTCH in the system of Rostoker. The motivation would be to use an available type of channel. The access point is a AM-SAP is missing from Rostoker. However, Forssell discloses in column 3, lines 57-59, that acknowledged mode is an available

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RLC mode, and that the network operates over an SAP in column 2, lines 54-55. It would have been obvious to one skilled in the art at the time of the invention to use an AM-SAP in the system of Rostoker. The motivation would be to use a mode commonly available in RLC communication.

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker in view of Forrsell and Parmar in further view of Grover.

Regarding claim 19, the deciphering module includes a deciphering block and a demultiplex/routing block that transmits control PDUs received from the lower layer to an RLC control module and transmits data PDUs to the deciphering block is missing from Rostoker. However, Grover discloses in column 10, lines 23-26, a system that uses a demultiplexer to separate control and data information in a decrypting system. It would have been obvious to one skilled in the art at the time of the invention to demultiplex and decipher the control and data PDUs. The motivation would be to distinguish the different kinds of PDUs for processing.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker in view of Forrsell and Parmar in further view of Grover and Choi.

Regarding claim 20, the demultiplex/routing block checks a D/C field within the PDUs to determine whether the PDUs are control PDUs or data PDUs is missing from Rostoker. However, Choi discloses in column 8, lines 64-66, a D/C field to indicate whether a packet is control or data. It would have been obvious to one skilled in the art at the time of the invention to check the D/C field to distinguish the types of packets. The motivation would be to determine the type of packet for processing.



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8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker in view of Forrsell and Parmar in further view of Grover, Choi, and Lindquist.

Regarding claim 21, the header removing module extracts piggybacked information from the data PDUs is missing from Rostoker. However, Lindquist discloses in column 9, lines 52-57, extracting piggybacked values from a transmission. It would have been obvious to one skilled in the art at the time of the invention to extract piggybacked information as is done in Lindquist in the system of Rostoker. The motivation would be to process all the information in the signal.

9. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker in view of Grover.

Regarding claim 42, the deciphering step includes transmitting control PDUs an RLC control module and deciphering only data PDUs is missing from Rostoker. However, Grover discloses in column 10, lines 23-29, a system that uses a demultiplexer to separate control and data information in a decrypting system. It would have been obvious to one skilled in the art at the time of the invention to demultiplex and separate the control and data PDUs, and decrypt the PDUs as needed. The motivation would be to distinguish and properly process the different kinds of PDUs.

10. Claims 64 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker in view of Treadaway.

Regarding claim 64, the sequence number is not ciphered and the data and the optional length indicator are ciphered is missing from Rostoker. However, Treadaway discloses in figure 17 and column 24, lines 1-15, a packet structure that appends the

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length field to the data first, then performs encryption and adds sequence numbers. It would have been obvious to one skilled in the art at the time of the invention to use the packet structure of Treadaway in the system of Rostoker. The motivation would be to provide synchronization information to the receiving terminal (Treadaway, column 24, lines 11-13).

Regarding claim 71, the sequence number is not ciphered and the data and the optional length indicator are ciphered is missing from Rostoker. However, Treadaway discloses in figure 17 and column 24, lines 1-15, a packet structure that appends the length field to the data first, then performs encryption and adds sequence numbers. It would have been obvious to one skilled in the art at the time of the invention to use the packet structure of Treadaway in the system of Rostoker. The motivation would be to provide synchronization information to the receiving terminal (Treadaway, column 24, lines 11-13).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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